

RECEIVED
CENTRAL FAX CENTER

OCT 16 2006

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (currently amended): A magnetic head comprising:
 - 2 a write head portion including a first magnetic pole and a second magnetic pole;
 - 3 an induction coil being disposed at least in part between said first and second magnetic
 - 4 poles;
 - 5 an electrical lead of said induction coil having an electrical lead thickness and being
 - 6 disposed in a layer of the magnetic head;
 - 7 a heat sink being disposed within said layer and being coplanar within the magnetic head
 - 8 with said electrical lead of said coil, said heat sink having a heat sink thickness that is equal to
 - 9 said electrical lead thickness, and wherein said heat sink is disposed directly upon a seed layer
 - 10 that is disposed at least in part directly upon said second magnetic pole.
- 1 2. (original): A magnetic head as described in claim 1 wherein said electrical lead is
- 2 comprised of copper and said heat sink is comprised of copper.
- 1 3. (cancelled)
- 1 4. (cancelled)
- 1 5. (currently amended): A magnetic head as described in claim [[4]] 1 wherein said heat
- 2 sink includes a first substantial portion that is disposed above said second magnetic pole, and
- 3 another substantial portion that is disposed away from said second magnetic pole.

1 6. (original): A magnetic head as described in claim 5 wherein said heat sink is disposed
2 away from an air bearing surface of the magnetic head.

1 7. (previously presented): A magnetic head comprising:
2 a write head portion including a first magnetic pole and a second magnetic pole;
3 an induction coil being disposed at least in part between said first and second magnetic
4 poles;
5 an electrical lead of said induction coil being disposed in a layer of the magnetic head;
6 a first heat sink being coplanar within the magnetic head with said electrical lead of said
7 coil and a second heat sink, and wherein said first heat sink and said second heat sink are
8 thermally interconnected by a heat sink interconnect member.

1 8. (original): A magnetic head as described in claim 7 wherein said second heat sink is
2 disposed below said first magnetic pole.

1 9. (previously presented): A magnetic head as described in claim 8 wherein said first heat
2 sink is thermally interconnected through an interconnect member with a slider body portion of
3 the magnetic head.

1 10. (previously presented): A magnetic head as described in claim 8 wherein said first heat
2 sink is thermally interconnected with said second heat sink through an interconnect member, and
3 said second heat sink is thermally interconnected with said slider body through a second
4 interconnect member.

1 11. (original): A magnetic head as described in claim 1 wherein said magnetic head is a
2 longitudinal head.

1 12. (original): A magnetic head as described in claim 1 wherein said magnetic head is a
2 perpendicular magnetic head.

1 13-20 (cancelled):

1 21. (currently amended): A hard disk drive, comprising:
2 at least one hard disk being adapted for rotary motion upon a disk drive;
3 at least one slider device having a slider body portion being adapted to fly over said hard
4 disk;
5 a magnetic head being formed on said slider body for writing data to said hard disk, said
6 magnetic head including:
7 a write head portion including a first magnetic pole and a second magnetic pole;
8 an induction coil being disposed at least in part between said first and second magnetic
9 poles;
10 an electrical lead of said induction coil having an electrical lead thickness and being
11 disposed in a layer of the magnetic head;
12 a heat sink being disposed within said layer and being coplanar within the magnetic head
13 with said electrical lead of said coil, said heat sink having heat sink thickness that is equal to said
14 electrical lead thickness, and wherein said heat sink is disposed directly upon a seed layer that is
15 disposed at least in part directly upon said second magnetic pole.

1 22. (cancelled)

1 23. (cancelled)

1 24. (previously presented): A hard disk drive, comprising:

2 at least one hard disk being adapted for rotary motion upon a disk drive;

3 at least one slider device having a slider body portion being adapted to fly over said hard
4 disk;

5 a magnetic head being formed on said slider body for writing data to said hard disk, said
6 magnetic head including:

7 a write head portion including a first magnetic pole and a second magnetic pole;

8 an induction coil being disposed at least in part between said first and second magnetic
9 poles;

10 an electrical lead of said induction coil being disposed in a layer of the magnetic head;

11 a first heat sink being coplanar within the magnetic head with said electrical lead of said
12 coil and a second heat sink, and wherein said first heat sink and said second heat sink are
13 thermally interconnected by a heat sink interconnect member.

1 25. (original): A hard disk drive as described in claim 24 wherein said second heat sink is
2 disposed below said first magnetic pole.

1 26. (previously presented): A hard disk drive as described in claim 25 wherein said first heat
2 sink is thermally interconnected through an interconnect member with a slider body portion of
3 the magnetic head.

1 27. (previously presented): A hard disk drive as described in claim 25 wherein said first heat
2 sink is thermally interconnected with said second heat sink through an interconnect member, and
3 said second heat sink is thermally interconnected with said slider body through a second
4 interconnect member.